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## Nitrogen Newsletter

Issue 16, December 2010

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*Nitrogen Newsletter is a summary of recent publications, news and reports related to the cycling, effects and management of nitrogen. Prepared by Mary O'Brien and Jana Compton.*

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*Please note: Most of these links are available to EPA staff through library access – not all links will be available to folks outside EPA, depending on your access to specific journals and websites.*

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### Special Issues

*Atmospheric Environment*, 44(37), December 2010. ISSN 1352-2310.

**Transport Impacts on Atmosphere and Climate: The ATTICA Assessment Report**  
Edited by Robert Sausen.

*Ecosystems*, 13(8), December 2010. ISSN 1432-9840.

### Articles

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**Effects of estuarine sediment hypoxia on nitrogen fluxes and ammonia oxidizer gene transcription**

*FEMS Microbiology Ecology*, 75(1): 111-122, January 2011. ISSN 0168-6496.

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**Adsorption dynamics and equilibrium studies of nitrate onto various soils**

*Fresenius Environmental Bulletin*, 19(10): 2246-2252, 2010. ISSN 1018-4619

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**Nitrification and denitrification response to varying periods of desiccation and inundation in a western Kansas stream**  
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**Nitrous oxide emission from denitrification in stream and river networks**  
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*Hydrobiologia*, 658(1): 55-66, January 2011. ISSN 0018-8158.  
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*Landscape and Urban Planning*, 98(3-4; Sp. Iss. SI): 172-181, December 2010. ISSN 0169-2046  
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*Journal of Hydrology*, 393(3-4): 186-196, November 8, 2010. ISSN 0022-1694.  
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**Soil nitrous oxide emissions in corn following three decades of tillage and rotation treatments**

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*Ecological Applications*, 20(8): 2104-2115, December 2010. ISSN 1051-0761.

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**Abundance and diversity of archaeal ammonia oxidizers in a coastal groundwater system**

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**Comparison of denitrification characteristics among three habitat types of a large river floodplain: Atchafalaya River Basin, Louisiana**

*Hydrobiologia*, 658(1): 17-25, January 2011. ISSN 0018-8158.

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**Spatial and temporal variability in nitrogenase activity and diazotrophic community composition in coastal microbial mats**

*Marine Ecology-Progress Series*, 417: 13-25, 2010. ISSN 0171-8630.

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**Diurnal fluxes of CO<sub>2</sub> and N<sub>2</sub>O from cattle-impacted soil and implications for emission estimates**

*Plant Soil and Environment*, 56(10): 451-457, 2010. ISSN 1214-1178.

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**Repression of potential nitrification activities by matgrass sward species**

*Plant and Soil*, 337(1-2): 435-445, December 2010. ISSN 0032-079X.

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*Water Science and Technology*, 62(10): 2389-2397, 2010. ISSN 0273-1223.  
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**Towards an agronomic assessment of N<sub>2</sub>O emissions: a case study for arable crops**  
*European Journal of Soil Science*, 61(6): 903-913, December 2010. ISSN 1351-0754.  
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- Volk, Matthias, Daniel Obrist, Kris Novak, Robin Giger, Seraina Bassin, and Juerg Fuhrer.  
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*Global Change Biology*, 17(1): 366-376, January 2011. ISSN 1354-1013.  
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*Ecological Research*, 25(6): 1121-1128, November 2010. ISSN 0912-3814.

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*Soil Biology & Biochemistry*, 42(12): 2161-2173, December 2010. ISSN 0038-0717.

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**Nutrient recycling by fish in streams along a gradient of agricultural land use**

*Global Change Biology*, 17(1): 130-139, January 2011. ISSN 1354-1013.

<http://dx.doi.org/10.1111/j.1365-2486.2010.02284.x>

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**Nitrogen versus phosphorus limitation in a subtropical coastal embayment**

**(Moreton Bay; Australia): Implications for management**

*Ecological Modelling*, 222(1): 120-130, January 10, 2011. ISSN 0304-3800.

<http://dx.doi.org/10.1016/j.ecolmodel.2010.08.040>

## News

**Cultivated organic soils are a net source of greenhouse gases**

Faculty of Agricultural Sciences, Aarhus University, News, Published Monday 27 December 2010.

[http://agrsci.au.dk/en/nyheder/artikel/cultivated\\_organic\\_soils\\_are\\_a\\_net\\_source\\_of\\_greenhouse\\_gases-1/](http://agrsci.au.dk/en/nyheder/artikel/cultivated_organic_soils_are_a_net_source_of_greenhouse_gases-1/)

**For BNA subscribers (including EPA staff):**

**Chesapeake Bay: EPA issues 'biggest-ever' TMDL in plan to clean up Bay with watershed-wide action**

*Daily Environment Report*, December 30, 2010

[http://news.bna.com/desktoplib.epa.gov/deln/DELNWB/split\\_display.adp?fedfid=18906304&vname=dennotallissues&wsn=498004500&searchid=13410862&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=0](http://news.bna.com/desktoplib.epa.gov/deln/DELNWB/split_display.adp?fedfid=18906304&vname=dennotallissues&wsn=498004500&searchid=13410862&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=0)

**Chesapeake Bay: bay health improved, but recovery requires big cuts in nutrients, sediment, CBF says**

*Daily Environment Report*, December 29, 2010

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**Sustainability: EPA told innovative, flexible methods key to sustainable environmental protection**

*Daily Environment Report*, December 15, 2010

[http://news.bna.com.desktoplib.epa.gov/deln/DELNWB/split\\_display.adp?fedfid=18834302&vname=dennotallissues&wsn=498317000&searchid=13410862&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1](http://news.bna.com.desktoplib.epa.gov/deln/DELNWB/split_display.adp?fedfid=18834302&vname=dennotallissues&wsn=498317000&searchid=13410862&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=1)

**Climate change: Interior announces completion of methodology for measuring natural carbon sequestration**

*Daily Environment Report*, December 14, 2010

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### **Chesapeake Bay TMDL executive summary**

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Chesapeake Bay Foundation

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### **Sustainability at the National Academies: Incorporating sustainability in the U.S. Environmental Protection Agency**

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**The State of Florida and Charles H. Bronson, Florida Commissioner of Agriculture, Plaintiffs, v. Lisa P. Jackson, as Administrator of the United States Environmental Protection Agency; and the United States Environmental Protection Agency, Defendants.**

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